RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _____ 10/578, 158 _____

Source: _____ IFWP _____

Date Processed by STIC: _____ 05/16/2006 _____

ENTERED

RAW SEQUENCE LISTING   DATE: 05/16/2006
PATENT APPLICATION: US/10/578,158   TIME: 09:46:53

Input Set : A:\E5106-00003 Motoneuronotrophic Factor Gene Sequences.txt
Output Set: N:\CRF4\05162006\J578158.raw

```
      3 <110> APPLICANT: XUE, Bob, Baoguo
      5 <120> TITLE OF INVENTION: Motoneuronotrophic Factor Gene Sequences
      7 <130> FILE REFERENCE: E5106.00003
C-->  9 <140> CURRENT APPLICATION NUMBER: US/10/578,158
C-->  9 <141> CURRENT FILING DATE: 2006-05-04
      9 <150> PRIOR APPLICATION NUMBER: 60/518,581
     10 <151> PRIOR FILING DATE: 2003-11-07
     12 <160> NUMBER OF SEQ ID NOS: 32
     14 <170> SOFTWARE: PatentIn version 3.3
     16 <210> SEQ ID NO: 1
     17 <211> LENGTH: 1859
     18 <212> TYPE: DNA
     19 <213> ORGANISM: Homo sapiens
     21 <400> SEQUENCE: 1
     22 cagctgctca gaggagtagc tgggaccagg gcccttcagt attctacctc cagacccagc     60
     24 ctaagcccac gctctctgag aaggccttgt atacactgaa ctccctcatg tatttcactg    120
     26 acaactgttt tctgtgccca tgaagagttg caagagcacc ttgaaaacac aagcaaacat    180
     28 atcatatcaa cttccaggca tctaattaat tgtgcaccaa aatcgttacc cttccaatct    240
     30 tgcaacagaa gagcaaaagc tgcttagacc ttactcaaag gctccaaagc agaaacaagt    300
     32 tttgcttctt gcagcaatgt gtaacagagg aaacagatgt cctggaagat cccatggtct    360
     34 gtttcaggtg agatggaacc aatgctgcac acgaagattc atctcaaatg aaatgcacag    420
     36 gaaaagccaa ttactttatg tgaataaaag aataaatccc taaagcagtg gttctcaacc    480
     38 agagtgatac cacccacacc ccagagggca tttgggaatt cttggggaca ttttggggtg    540
     40 acacactgaa ctgctggatg ctatcagcat ttagtaggta tgctcgatgt cttgcagaag    600
     42 gacatgatgg tcctacacag taaggaatgg attacctaca atattaatag cagcctccca    660
     44 tacacacttt tgacaccctt ccctaaagga ttaatatgct ccaaccttcc tgtccccaca    720
     46 gttcagtggc tctccctacc ctcaccatga tcggatgaaa aaaaataagg tttcacagct    780
     48 taagagtgaa attctggaat ccaactacaa gctcataact gtagcatgga acctggtagt    840
     50 agcataataa ataaattttt agtaagaggc ttaagaaatt ttagcaaaaa aagcactccc    900
     52 tttcttcctc cctacatatc tcatatgttt ttcaacacaa aaaattctgt gattttagag    960
     54 aaacttctta cagtactttt aagttcaaaa ccagatgctc attacagttc ttttaaacac   1020
     56 caaactagtc atctcaaaaa tatggctaac tctctggact aaattccata ggaaaaatta   1080
     58 ttaatttcaa aatgcctaat tttgatcaaa tgcctgaaag agccaaaggc aatcatgtcc   1140
     60 tgcttctcac tcagggcaga gttccatgag gtcagaaaag ctccaatgat atccggaggt   1200
     62 ctgtcagaga ttaaaatatc atcctaacaa ttcacaagct acttctaagt gttaccctaa   1260
     64 attagtcact aatcgtttct cccccaacac tatttcacaa attaaagttt acagaattga   1320
     66 caaaaaacca aaccaaatga aaacaaaccc caggctattt gcaggggggg ggaaagagat   1380
     68 accccaaaag tcaaccctat ttcacagtag ttaaaagagt gatccaacag atattaccct   1440
     70 ccataaagta ccctaaaggc aggagcaatc tttcccctac actatctaaa ttttcccaac   1500
     72 tcacccaaaa gaatcttaag atgtaacttc atcactcaac ttgccaatta gcaaatagcg   1560
     74 gccccacat ccctttttggc caattttcta gatgcctgac ctagcagaca gacctgtttt   1620
     76 cctcctgcca ggcctttttt gccctcccgc taggagcctg ggaaatcccc ctccaacctt   1680
     78 ttgctggcct gtcaccagaa gttcataaaa tgaattcatc cagattctct gaatcctcct   1740
```

RAW SEQUENCE LISTING   DATE: 05/16/2006
PATENT APPLICATION: US/10/578,158   TIME: 09:46:53

Input Set : A:\E5106-00003 Motoneuronotrophic Factor Gene Sequences.txt
Output Set: N:\CRF4\05162006\J578158.raw

```
 80 tttccccagt catgtgccaa cagccaggca ataatgcccc accgtgacag gctccctgtt   1800
 82 acaaaaagat gcagattcac gggaagacca agcacttagc atggagcaga agaaaaaaa    1859
 85 <210> SEQ ID NO: 2
 86 <211> LENGTH: 4359
 87 <212> TYPE: DNA
 88 <213> ORGANISM: Homo sapiens
 90 <400> SEQUENCE: 2
 91 accacagaat gctttccttt ctccagaaac catgtgaagg cccattactt ctagcacacc     60
 93 tatggcggga cacaaaggct ttctgattca ctccaaggga gctggcaatt ctcccccatt    120
 95 agctaacaat aaaagaaaat taaatcactt gagaaccta cagtggcagc aaaatagagc     180
 97 ccaagagata cctcctagca tgttcaaaga cttattaaaa gccacgttgg gccaggcgtg    240
 99 gtggcttatg cctataatcc caataccttg ggaggttgag gtgggaggat tgcttaaagc    300
101 ccggagtttg aggccagcct aggcaacata gtgagacctc atctctacaa aagattgtat    360
103 aaaatttagc caggtgtagt ggtgcgcacc tgagtcccag ctactctgga agctgagatg    420
105 ggaagacggc ttgagcccaa gagtttgagg ctacagtgaa ccatgattgc accatggcac    480
107 tccagcctgg gcaacagagc aagaccctgt ctcaaaaata aataaataac aaaaacaaaa    540
109 cacaatcacc ttgtatcagt ctcagttgat ggcttgatga caataaagaa cagtttagac    600
111 tttctgaaag tgcatacata tatatacaca tatgactaag aaggtgaagt gaagccctca    660
113 atggccagcc cttttatagt agaacctaga aaacagcaac ttctttcaac atggtggatg    720
115 gtgcatgttt tgtaccccac atttagaaat ccatactctg agacaaacag aactaccgaa    780
117 agagaatgac caggcctcca gaatagcacc gaggcagcca tcaggagtta tagcaaaact    840
119 ttttaacgtg gaaagggagt cactctgctt ctataaagca gcccttatca gcggcattat    900
121 gagtaaaagc agcccactaa tgcaggccag actttaggac acagaaccag attccatttg    960
123 ggggctacag ctagcacagc tgtaaacctc tctccaccca tcaaattctg agaccattag   1020
125 gcctggcacg gtggctcatg cctgtggtcc cagcactttg ggaagccaag ctgggaggat   1080
127 caactgagcc caggagtctg agactgcagt gagctatgat ctcgccactg cactccagcc   1140
129 tgggtgacag aataagaccc tgtctcaaaa gaaaaaaaaa aaaaatctga ggcgattgaa   1200
131 ggcagacaac tataagagag tgcccccata ggaactccac cactctccat ttagaatgtc   1260
133 ctttgacttt tgtgcacatt atctcatgag accctcacta tgactctgag aggtaagcag   1320
135 gacaggcgtc ttctacattt tacagatgaa taaattgtga ctgaggttaa atgactcgct   1380
137 tgcccaaggt cacaaatcat gcagctaatc agctgcctaa ccaggagatg agcctagcac   1440
139 tctgactcgt aggccagcgc aatctccagg acaccatgcg gctttgtgat gtttttcagat  1500
141 aagaggcgga agagggtact ggttaagagc ccaggttctg gcaccagcca acctgcattc   1560
143 caatcccatc tccaccacct actaaccacc tgatcttgtg tgagttcctt aacctcccca   1620
145 aacctgtttc cttacctgca caatggggt gggagagaac agtcttactc catagagtca    1680
147 gagtgatgat taagtgagat gatgaacata aagtactcaa attcatgtac tcaaaaaatg   1740
149 tgagtggcag gcacagtgca ggacccacaa cagagatcaa ggaacacagt cctgctctca   1800
151 cggagcttag actttaggca aaccatacac agaaaaaagt aaacagataa aatacttaca   1860
153 aagtgtgtta agaatgatta aggtgcaggg cgcagtggct cacgcctgta atcctatcac   1920
155 tttgggaggc cgggtcaggc agatcacctg aggtcgggag tttgagacca gcctgataaa   1980
157 catggagaaa tcccgtctct acaaaaaaca aaattagccc caagcttatt gggcatggtg   2040
159 gcgcatgcca gtaatcccag ctactcggga ggctgaggca ggagaattgc ttgaacccgg   2100
161 gaggcggaga ctgcagtgag cagaggtcgc accactgcac tccagcctgg gcaacaagag   2160
163 cgaaactctg tctcaaaaaa aagaatgatt aaggtaacag gtgagtgact ggagagaata   2220
165 accggagggg ccaatttta agagtggtct ctaagcccta agggatcaga aagagaaatt    2280
167 cgtgtgaaga acggagagaa aagcactcta ggattaggga atggtatacg tggggtcac    2340
169 agcacaggga agtcaggaac ctagagaaga caaatgtgac tacagcgctt cctctcccgg   2400
171 gatttgcgga gcaaggctgg agctcgtgag ggtgaccaca actatttaa aaacgacaaa    2460
173 gataaggctc aagagagggg atatgtcttg cccaaggtca cagctgctca gaggagtagc   2520
```

```
175 tgggaccagg gcccttcagt attctacctc cagacccagc ctaagcccac gctctctgag    2580
177 aaggccttgt atacactgaa ctccctcatg tatttcactg acaactgttt tctgtgccca    2640
179 tgaagagttg caagagcacc ttgaaaacac aagcaaacat atcatatcaa cttccaggca    2700
181 tctaattaat tgtgcaccaa aatcgttacc cttccaatct tgcaacagaa gagcaaaagc    2760
183 tgcttagacc ttactcaaag gctccaaagc agaaacaagt tttgcttctt gcagcaatgt    2820
185 gtaacagagg aaacagatgt cctggaagat cccatggtct gtttcaggtg agatggaacc    2880
187 aatgctgcac acgaagattc atctcaaatg aaatgcacag gaaaagccaa ttactttatg    2940
189 tgaataaaag aataaatccc taaagcagtg gttctcaacc agagtgatac cacccacacc    3000
191 ccagagggca tttgggaatt cttggggaca ttttggggtg acacactgaa ctgctggatg    3060
193 ctatcagcat ttagtaggta tgctcgatgt cttgcagaag gacatgatgg tcctacacag    3120
195 taaggaatgg attacctaca atattaatag cagcctccca tacacacttt tgacacccтt    3180
197 ccctaaagga ttaatatgct ccaaccttcc tgtccccaca gttcagtggc tctccctacc    3240
199 ctcaccatga tcggatgaaa aaaaataagg tttcacagct taagagtgaa attctggaat    3300
201 ccaactacaa gctcataact gtagcatgga acctggtagt agcataataa ataaattttt    3360
203 agtaagaggc ttaagaaatt ttagcaaaaa aagcactccc tttcttcctc cctacatatc    3420
205 tcatatgttt ttcaacacaa aaaattctgt gattttagag aaacttctta cagtactttt    3480
207 aagttcaaaa ccagatgctc attacagttc ttttaaacac caaactagtc atctcaaaaa    3540
209 tatggctaac tctctggact aaattccata ggaaaaatta ttaatttcaa aatgcctaat    3600
211 tttgatcaaa tgcctgaaag agccaaaggc aatcatgtcc tgcttctcac tcagggcaga    3660
213 gttccatgag gtcagaaaag ctccaatgat atccggaggt ctgtcagaga ttaaaatatc    3720
215 atcctaacaa ttcacaagct acttctaagt gttaccctaa attagtcact aatcgtttct    3780
217 cccccaacac tatttcacaa attaaagttt acagaattga caaaaaacca aaccaaatga    3840
219 aaacaaaccc caggctattt gcaggggggg ggaaagagat accccaaaag tcaaccctat    3900
221 ttcacagtag ttaaaagagt gatccaacag atattaccct ccataaagta ccctaaaggc    3960
223 aggagcaatc tttcccctac actatctaaa ttttcccaac tcacccaaaa gaatcttaag    4020
225 atgtaacttc atcactcaac ttgccaatta gcaaatagcg gcccccacat cccttttggc    4080
227 caattttcta gatgcctgac ctagcagaca gacctgtttt cctcctgcca ggcctttttt    4140
229 gccctcccgc taggagcctg ggaaatcccc ctccaacctt ttgctggcct gtcaccagaa    4200
231 gttcataaaa tgaattcatc cagattctct gaatcctcct tttccccagt catgtgccaa    4260
233 cagccaggca ataatgcccc accgtgacag gctccctgtt acaaaaagat gcagattcac    4320
235 gggaagacca agcacttagc atggagcaga agaaaaaaa                           4359
238 <210> SEQ ID NO: 3
239 <211> LENGTH: 22
240 <212> TYPE: DNA
241 <213> ORGANISM: Homo sapiens
243 <400> SEQUENCE: 3
244 tttcttcctc cctacatctc tc                                               22
247 <210> SEQ ID NO: 4
248 <211> LENGTH: 21
249 <212> TYPE: DNA
250 <213> ORGANISM: Homo sapiens
252 <400> SEQUENCE: 4
253 gagggtaata tctgttggat c                                                21
256 <210> SEQ ID NO: 5
257 <211> LENGTH: 20
258 <212> TYPE: DNA
259 <213> ORGANISM: Homo sapiens
261 <400> SEQUENCE: 5
262 ttggggacat tttggggtga                                                  20
```

RAW SEQUENCE LISTING   DATE: 05/16/2006
PATENT APPLICATION: US/10/578,158   TIME: 09:46:53

Input Set : A:\E5106-00003 Motoneuronotrophic Factor Gene Sequences.txt
Output Set: N:\CRF4\05162006\J578158.raw

```
265 <210> SEQ ID NO: 6
266 <211> LENGTH: 20
267 <212> TYPE: DNA
268 <213> ORGANISM: Homo sapiens
270 <400> SEQUENCE: 6
271 gctcgatgtc ttgcagaagg                                      20
274 <210> SEQ ID NO: 7
275 <211> LENGTH: 21
276 <212> TYPE: DNA
277 <213> ORGANISM: Homo sapiens
279 <400> SEQUENCE: 7
280 agggtaacac ttagaagtag c                                    21
283 <210> SEQ ID NO: 8
284 <211> LENGTH: 19
285 <212> TYPE: DNA
286 <213> ORGANISM: Homo sapiens
288 <400> SEQUENCE: 8
289 tcaccccaaa atgtcccca                                       19
292 <210> SEQ ID NO: 9
293 <211> LENGTH: 27
294 <212> TYPE: DNA
295 <213> ORGANISM: Artificial
297 <220> FEATURE:
298 <223> OTHER INFORMATION: Vector primer
300 <400> SEQUENCE: 9
301 ctgttagctt ggtaccgagc tcggatc                              27
304 <210> SEQ ID NO: 10
305 <211> LENGTH: 27
306 <212> TYPE: DNA
307 <213> ORGANISM: Homo sapiens
309 <400> SEQUENCE: 10
310 taggggaaag attgctcctg cctttag                              27
313 <210> SEQ ID NO: 11
314 <211> LENGTH: 27
315 <212> TYPE: DNA
316 <213> ORGANISM: Homo sapiens
318 <400> SEQUENCE: 11
319 tattgcctgg ctgttggcac atgactg                              27
322 <210> SEQ ID NO: 12
323 <211> LENGTH: 27
324 <212> TYPE: DNA
325 <213> ORGANISM: Homo sapiens
327 <400> SEQUENCE: 12
328 ctgctccatg ctaagtgctt ggtcttc                              27
331 <210> SEQ ID NO: 13
332 <211> LENGTH: 24
333 <212> TYPE: PRT
334 <213> ORGANISM: Homo sapiens
336 <400> SEQUENCE: 13
```

```
338 Met Ser Trp Lys Ile Pro Trp Ser Val Ser Gly Glu Met Glu Pro Met
339 1                   5                   10                  15
342 Leu His Thr Lys Ile His Leu Lys
343                 20
346 <210> SEQ ID NO: 14
347 <211> LENGTH: 56
348 <212> TYPE: PRT
349 <213> ORGANISM: Homo sapiens
351 <400> SEQUENCE: 14
353 Met Leu Asp Val Leu Gln Lys Asp Met Met Val Leu His Ser Lys Glu
354 1                   5                   10                  15
357 Trp Ile Thr Tyr Asn Ile Asn Ser Ser Leu Pro Tyr Thr Leu Leu Thr
358                 20                  25                  30
361 Pro Phe Pro Lys Gly Leu Ile Cys Ser Asn Leu Pro Val Pro Thr Val
362             35                  40                  45
365 Gln Trp Leu Ser Leu Pro Ser Pro
366     50                  55
369 <210> SEQ ID NO: 15
370 <211> LENGTH: 78
371 <212> TYPE: PRT
372 <213> ORGANISM: Homo sapiens
374 <400> SEQUENCE: 15
376 Met Glu Pro Gly Ser Ser Ile Ile Asn Lys Phe Leu Val Arg Gly Leu
377 1                   5                   10                  15
380 Arg Asn Phe Ser Lys Lys Ser Thr Pro Phe Leu Pro Pro Tyr Ile Ser
381                 20                  25                  30
384 His Met Phe Phe Asn Thr Lys Asn Ser Val Ile Leu Glu Lys Leu Leu
385             35                  40                  45
388 Thr Val Leu Leu Ser Ser Lys Pro Asp Ala His Tyr Ser Ser Phe Lys
389     50                  55                  60
392 His Gln Thr Ser His Leu Lys Asn Met Ala Asn Ser Leu Asp
393 65                  70                  75
396 <210> SEQ ID NO: 16
397 <211> LENGTH: 30
398 <212> TYPE: PRT
399 <213> ORGANISM: Homo sapiens
401 <400> SEQUENCE: 16
403 Met Ser Cys Phe Ser Leu Arg Ala Glu Phe His Glu Val Arg Lys Ala
404 1                   5                   10                  15
407 Pro Met Ile Ser Gly Gly Leu Ser Glu Ile Lys Ile Ser Ser
408                 20                  25                  30
411 <210> SEQ ID NO: 17
412 <211> LENGTH: 21
413 <212> TYPE: PRT
414 <213> ORGANISM: Homo sapiens
416 <400> SEQUENCE: 17
418 Met Pro His Arg Asp Arg Leu Pro Val Thr Lys Arg Cys Arg Phe Thr
419 1                   5                   10                  15
422 Gly Arg Pro Ser Thr
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/16/2006
PATENT APPLICATION: US/10/578,158   TIME: 09:46:54

Input Set : A:\E5106-00003 Motoneuronotrophic Factor Gene Sequences.txt
Output Set: N:\CRF4\05162006\J578158.raw

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:9

VERIFICATION SUMMARY   DATE: 05/16/2006
PATENT APPLICATION: **US/10/578,158**   TIME: 09:46:54

Input Set : **A:\E5106-00003 Motoneuronotrophic Factor Gene Sequences.txt**
Output Set: **N:\CRF4\05162006\J578158.raw**

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date